REMARKS

Claims 1, 3 and 5-7 are pending in this application. By this Amendment, claims 1 and 7 are amended. Support for the amendments can be found, for example, in Examples 1-4. No new matter is added. Reconsideration and prompt allowance of the application based on the above amendments and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; (c) satisfy a requirement of form asserted in the previous Office Action; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

I. Rejection under 35 U.S.C. §112

The Office Action rejects claim 7 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Specifically, the Office Action asserts that claim 7 does not define any active method of using steps. Applicants respectfully traverse the rejection.

By this Amendment, claim 7 is amended to be directed to a method for producing a glass hard disk platter comprising polishing the glass hard disk platter with a stable slurry. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejection under 35 U.S.C. §103

The Office Action rejects claims 1, 3, and 5-7 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,962,343 to Kasai et al. (Kasai) in view of U.S. Patent No. 6,221,118 to

Yoshida et al. (Yoshida) and U.S. Patent No. 4,942,697 to Khaladji et al. (Khaladji). Applicants respectfully traverse the rejection.

The Office Action asserts that Kasai teaches the surface modified cerium (IV) oxide abrasive stable slurry, for polishing the glass substrate which comprises cerium (IV) oxide having the claimed size, concentration, and surface area. The Office Action further asserts that Kasai satisfies the claimed limitations of the cerium salt, both molar ratios, ammonium salt and use of quaternary ammonium ion. Additionally, the Office Action asserts Yoshida, teaches that ceria polishing slurries are known to be used to polish magnetic disks, including magnetic glass disks. Finally, the Office Action asserts that Khaladji teaches the use of a high-purity cerium salt to make a ceria oxide solution. However, Kasai, Yoshida, and Khaladji, individually or in combination, fail to teach or suggest each and every feature of amended claims 1 and 7.

The relevant portion of amended claim 1 recites, "cerium (IV) oxide particles having an average secondary particle size of 0.1 to 0.5 μm ... a proportion of cerium expressed as a ratio of (cerium oxide)/(cerium oxide + other rare earth oxides) in the cerium (IV) oxide particles is 95% or more based on weight, ... and the stable slurry has a pH from 5 to 6." Additionally, claim 7 recites a method for producing a glass hard disk platter with similar features. Kasai, Yoshida and Khaladji, individually or in combination, fail to teach or suggest such a method of polishing or producing a glass hard disk.

Cerium oxide has a zeta potential (isoelectric point) in acidic and basic solutions, but has a zeta potential of approximately zero when the solution pH is between 5 and 6. Therefore, the further the solution pH is from the range of 5 to 6, the zeta potential becomes larger and the cerium oxide tends to be subjected to mono-dispersion. Put differently, the cerium oxide tends to be aggregated at a pH between 5 and 6 and to be dispersed at a pH other than between 5 and 6. Consequently, when the pH of the cerium oxide solution is

between 5 and 6, aggregates are formed with an average secondary particle size of 0.1 to 0.5 μm. Conversely, when the pH of the cerium oxide solution is outside the range of 5 to 6 the zeta potential rises and it is nearly impossible to form aggregates with an average secondary particle size of 0.1 to 0.5 μm.

Kasai teaches that when using crystalline ceric oxide to form an abrasive solution, a tetramethyl ammonium silicate aqueous solution should be added to the crystalline ceric oxide particles to adjust the pH of the solution to 10.3. See Kasai, Examples 4-7. Therefore, the abrasive solution in Kasai has a pH well above the claimed range of 5 to 6 and, thus a zeta potential significantly higher than zero. Consequently, the cerium oxide in the abrasive solution disclosed by Kasai is mono-dispersed and, thus, secondary particles with the size of 0.1 to 0.5 μm will not be formed in the abrasive solution taught by Kasai. Therefore, Kasai does not teach or suggest the abrasive slurry of the claimed invention.

Additionally, the teachings of Yoshida and Khaladji do not address the discrepancies of Kasai as to claims 1 and 7. The Office Action applies the teachings of Yoshida and Khaladji to assert that ceria polishing slurries are known to be used to polish magnetic disks and that it is advantageous to use high purity starting material when making ceria for polishing slurries, respectively. Neither Yoshida nor Khaladji teach or suggest the claimed pH of the abrasive solution or the average secondary particle size, as recited in claims 1 and 7. Therefore, Kasai, Yoshida, and Khaladji, individually or in combination, fail to teach or suggest each and every feature of amended claims 1 and 7.

For at least the reasons stated above, claims 1 and 7 would not have been rendered obvious by Kasai, Yoshida, and Khaladji, individually or in combination. Claims 3, 5, and 6 depend from claim 1 and, thus, also would not have been rendered obvious by Kasai, Yoshida or Khaladji, individually or in combination. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:NAB/lmf

Attachment:
Petition for Extension of Time (2 Month)

Date: August 7, 2008

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